Abstract

Title:	SECC-RISA: Science and partnerships for adaptation and resilience to climate change and climate variability
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UF Proposal:	$2,750,000 UM Co-Proposal: $875,000 Total cost: $3,625,000
Duration:	July 2010 – Jun 2015

Growing from the Florida Consortium, which was founded in 1996, the Southeast Climate Consortium (SECC) mission is to use advances in climate sciences, including improved capabilities to forecast seasonal climate and long-term climate change, to provide scientifically sound information and decision support tools for agricultural ecosystems, forests and other terrestrial ecosystems, and coastal ecosystems of the SE USA. As a multidisciplinary, multi-institutional team, the SECC conducts research and outreach to a broad community of users and forms partnerships with extension and education organizations to ensure that SECC products are relevant, reliable, and delivered to the public by these organizations through their networks and mechanisms. Until about 4 years ago, SECC research and extension focused primarily on the effects of seasonal climate variability in the agriculture sector, which is highly vulnerable to climate risks. With increasing awareness of climate change and its potential impacts, demand has grown for information on climate change and for information targeted to other ecosystems. The SECC is adopting a new organization to address the climate information needs of coastal and terrestrial ecosystems in addition to the agricultural ecosystems. Using RISA and leveraged funding, we will work in partnership with appropriate boundary organizations to assess end user needs and to develop and improve climate information for each of these ecosystems that can be used to manage risks and to pursue new economic opportunities. Research for the coastal and terrestrial ecosystems will build on the success of the SECC in providing an effective decision support system for agriculture, *AgroClimate.org.* Research and extension activities will emphasize collaboration among investigators from natural resources sciences, including climate, water resources, land, and energy, and investigators from applications sciences, including extension and outreach, human dimensions, integrated participatory systems analysis. Our four scientific objectives are: 1) Working with boundary organizations, planners, regional data clearinghouses, and other stakeholders, assess the needs of decision makers for climate information, their access to and applications of climate information, and time-scales for needed information; 2) Based on stakeholder assessments, develop partnerships with appropriate boundary organizations to meet the climate information needs of stakeholders, particularly in coastal and other terrestrial ecosystems; 3) Provide reliable, timely, probabilistic, and local climate information according to stakeholder needs for adaptation and resilience to climate change and climate variability. Providing this information will require production of downscaled forecasts at the local level and at 1- to 30-year time scales, as well as maintaining and providing historical data and analyses for the region; 4) Through integrated, multi-disciplinary activities, develop decision support tools and information delivery systems that give decision makers access to climate information that will help decision makers manage risks associated with climate change at various time scales.